REMARKS

In response to the Office Action mailed May 27, 2003, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the rejections set forth in the Office Action is addressed below, and amendments have been made in the claims. The claims as presented are believed to be in allowable condition.

Claims 1-28 are pending in the application, of which all claims stand rejected. Claims 1, 11, and 19 are independent. In this amendment, claims 1, 11, 19, 20, and 26 have been amended. Claims 1, 11, and 19 have been amended to clearly distinguish over the cited art. Claims 20 and 26 have been amended merely to address formalities and not for any substantial reason relating to patentability. No new matter has been added.

I. Rejection of Claims Under 35 U.S.C. §103(a) Over Kullick in View of Bergsten

In ¶5 of the Office Action, claims 11, 12, 14, 16-24, 27 and 28, including independent claims 11 and 19, are rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,751,997 ("Kullick") in view of U.S. Patent No. 6,282,610 ("Bergsten"). Independent claims 11 and 19 have been amended herein to clearly distinguish over the cited references.

a. Claim 11

Claim 11 has been amended to recite the computer system as comprising *a single backup controller capable of backing up data stored from both first and second host computers on a plurality of primary storage devices to a secondary storage device*, wherein the first host computer comprises a first platform and the second computer comprises a second platform different from the first platform.

No combination of Kullick and Bergsten discloses a single backup controller capable of backing up data stored from two host computers having different platforms. Merely substituting first and second heterogeneous computer devices for a pair of computer devices 18 in Kullick would not result in the system of Kullick having the capability of backing up data stored from heterogeneous computer devices using *a single backup controller*. As will be discussed below in reference to Bergsten, traditional computing systems do not have the capability of performing such a backup using a single backup controller.

The Office Action asserts that the computing system of Bergsten can include first and second heterogeneous host computers. But Bergsten does not disclose the backing up of data stored from the first and second heterogeneous host computers on a plurality of primary storage devices to a secondary storage device. Furthermore, based on the configuration of the Bergsten system, it clearly does not disclose a computing system wherein such a backup would be possible using *a single controller*.

In Bergsten, each one of storage controllers 3-1 through 3-M directly services one local host computer system and one local storage array (Col. 4, lines 32-35). Each storage controller includes interfaces 14-16 to allow the local host computer to communicate with the local storage array and other storage controllers (Fig. 3). In particular, storage controller 3 includes emulation drivers 21 (Fig. 4), which receive read and write requests from the local host computer 2 and convert the read and write requests into a format recognized by the operating system 20 of the storage controller 3 (Col. 7, lines 59-62). Storage controller 3 also includes physical drivers 22, which transform commands and control data from a format recognized by the storage controller 3 to one recognized by the local storage array (Col. 8, lines 1-6). Accordingly, it should be appreciated that each controller is dedicated to an associated local host, and enables write operations of data originated only by the associated local host. Put in other terms, the controller 3 acts as a "backup agent" to enable backup operations only for data that is stored by its associated local host on the local storage array.

Kullick does not disclose that the computer devices 18 can include devices from heterogeneous platforms. Thus, Kullick necessarily cannot teach the aspect of the present invention recited in claim 11 that relates to the use of *a single backup controller* capable of backing up data stored from heterogeneous host computers. Thus it is respectfully asserted that in view of the fact that neither Bergsten nor Kullick discloses this aspect of the present invention recited in claim 11, any alleged combination of Bergsten and Kullick would similarly fail to teach this feature.

If Kullick where modified to include heterogeneous host computers, the teachings of the prior art are that the system would need to include a separate backup controller for each platform, as the prior art conventionally employs a separate backup controller or agent capable of backing up data originating from each platform. There is simply nothing in the prior art of

record that would teach or suggest a computer system that includes *a single backup controller* capable of backing up data stored from heterogeneous platforms.

In view of the foregoing, it should be appreciated that neither Kullick nor Bergsten, nor any combination thereof, discloses or suggests a computer system including *a single backup controller* capable of backing up data stored from computers having two different platforms, as recited in claim 11. Accordingly, withdrawal of the rejection of claim 11 is respectfully requested.

Claims 12-18 and 27 depend from claim 11 and are allowable for at least the same reasons.

b. Claim 19

As amended, claim 19 recites a method of transferring data from at least one of a plurality of primary storage elements to a secondary storage element, the plurality of primary storage elements comprising a primary storage element that serves as primary non-backup storage for a host computer that is separate from and coupled to the primary storage element. The method comprises a step of automatically establishing a first connection through a network between a first primary storage element and the secondary storage element through which a first logical object can be transferred from the first primary storage element to the secondary storage element, the first connection being determined by at least one of the first primary storage element and the secondary storage element.

Neither Kullick nor Bergsten discloses automatically establishing a first connection through a network between a first primary storage element and a secondary storage element through which a first logical object can be transferred from the first primary storage element to the secondary storage element, the first connection being determined by at least one of the first primary storage element and the secondary storage element. Bergsten employs dedicated connections, and therefore does not disclose automatically establishing a first connection through a network between a first primary storage element and a secondary storage element.

The Office Action asserts that the disk 21 in the computer device 18 in Kullick corresponds to the primary storage element, and that the primary storage device 14 corresponds to the secondary storage element recited in claim 19. The Office Action asserts that it would have been obvious to one of ordinary skill in the art to modify the system of Kullick to employ

the primary storage device 14 as non-back-up storage "because it would have avoided the potential for a single-point failure in the system by allowing the secondary storage controller to function as hot backup in the event of failure of the primary storage controller" (col. 17, lines 50-67). Without acceding to the propriety of this alleged motivation, even if one of ordinary skill in the art would have been so motivated, the resulting combination would not yield or suggest the method recited in claim 19. In this respect, claim 19 has been amended to refer to the primary storage element as being separate from and coupled to the host computer. By contrast, the disk 21 that the Examiner relies upon as purportedly teaching the primary storage element in Kullick is contained within and actually forms part of the host computer, i.e. the computer device 18. Thus, claim 19 patentably distinguishes over the alleged combination of Kullick and Bergsten, such that the rejection of this claim over that combination of references should be withdrawn.

Claims 20-28 depend from claim 19 and are patentable for at least the same reasons.

II. Rejection of Claims Under 35 U.S.C. §103(a) Over Kullick in View of Beardsley

In ¶9 of the Office Action, claims 1-8, 10, and 26, including independent claim 1, are rejected under 35 U.S.C. §103(a) as being obvious over Kullick in view of U.S. Patent No. 5,680,580 ("Beardsley"). Independent claim 1 has been amended herein to clearly distinguish over the cited references.

Claim 1 has been amended to recite a computer system comprising a network, *separate from each of the one or more communication links that couple the storage domain to the host domain*, that couples the plurality of primary storage devices to the secondary storage device to permit one of the primary storage devices to access the secondary storage device through the network *without using any of the one or more communication links that couple the storage domain to the host domain*.

Kullick was the primary reference relied upon to reject claim 1, with Beardsley being relied upon solely for the teaching of a switched network – a limitation that is now been removed from claim 1. In both Kullick and Beardsley, a common network is used to facilitate both communication among storage devices and between host computers and the storage devices. Thus, to the extent that the prior art can be considered to comprise a host domain and a storage domain, a common network couples the host domain to the storage domain, and also interconnects the storage devices within the storage domain. Therefore, the prior art of record

clearly does not teach or suggest a computer system as recited in claim 1, which employs a separate network to couple a plurality of primary storage devices to a secondary storage device to permit one of the primary storage devices to access the secondary storage device through the network without using any communication link that couples the storage domain to the host domain. Thus, it is respectfully asserted that claim 1 patentably distinguishes over the prior art of record, such that the rejection of claim 1 should be withdrawn.

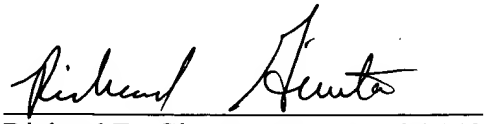
Claims 2-10 and 26 depend from claim 1 and are allowable for at least the same reasons.

Conclusion

In view of the foregoing amendments and remarks, this application is believed to be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this response, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the number listed below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,
Yuval Ofek et al., Applicants

By: 

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